REMARKS

This is in response to the Office Action mailed on September 18, 2007. In this Office Action claims 1 and 11-17 were rejected under 35 USC 103(a). In this Response, claim 1 is amended while claims 11-17 are cancelled. Claim 56 has also been added in this response.

Rejection under 35 USC 101

Claim 1 was rejected as being unpatentable in view of 35 USC 101. The Office Action on page 5 indicated claim 1 as being "software per se". In particular, the Office Action stated on page 5 that "the claimed steps are not being performed by any form of computer hardware component".

1. THE LAW OF PATENTABLE SUBJECT MATTER

§101 extends the offer of patent protection to "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof". As Congress commented in passing the statute, it was intended to cover "anything under the sun that was made by man", and the Supreme Court and the Court of Appeals for the Federal Circuit have both reiterated that observation, along with noting that the repeated usage of the word "any" applied to expansive descriptions of subject matter, were intended to emphasize that no restrictions were to be placed on patentable subject matter other than those specifically recited in §101. (S. Rep. No. 1979, 82d Congress, 2d Sess., 5 (1952); *Diamond v. Chakrabarty*, 447 U.S. 303, 206 USPQ 193 (1980); *State Street Bank & Trust v. Signature Financial Group*, 47 USPQ2d 1596, 1600 (Fed. Cir. 1998) (Rich, J.).)

Claims directed to methods have been found to be within the "process" category of §101. *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1450 (Fed. Cir. 1999) and MPEP §2106 IV A. Claims with functional material recorded on a computer-readable medium have been found to be within the "machine" category of § 101 and are considered statutory. In re Lowry, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) and MPEP §2106.01.

Despite the seemingly limitless expanse to patentable subject matter, the Supreme Court has identified three categories of unpatentable subject matter: "laws of nature, natural phenomena, and abstract ideas." *Diamond v. Diehr*, 450 U.S. 175, 185, 209 USPQ 1 (1981)

However, determining what is an "abstract idea" has been difficult for the courts. As noted by the U.S. Court of Appeals for the Federal Circuit "this court (and its predecessor) has struggled to make our understanding of the scope of §101 responsive to the needs of the modern world." *AT&T Corp. v. Excel Communications, Inc.,* 50 USPQ2d 1447, 1452 (Fed. Cir. 1999)

In *AT&T,* the Federal Circuit gave some guidance by stating that "the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it nonstatutory subject matter, unless, of course, its operation does not produce a 'useful, concrete and tangible result.'" *AT&T* at 1453. The formation of a 'useful, concrete and tangible result' in a claim constitutes a practical application of a mathematical algorithm, formula, or calculation and is therefore patentable subject matter. *State Street* at 1601.

Similarly, the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility as found in MPEP 2106 (IV)(C) indicates that abstract ideas are not patentable subject matter under 35 U.S.C. §101 but that "practical applications" of abstract ideas are patentable subject matter. A claimed invention is a practical application of an abstract idea if either:

"The claimed invention 'transforms' an article or physical object to a different state

or thing." or

"The claimed invention otherwise produces a useful, concrete and tangible result,

based on the factors discussed below." (MPEP 2106(IV)(C)(2)

Note that the case law and the Interim Guidelines do not require a claimed use for the "useful, concrete and tangible result". They only require the production of a "useful, concrete and tangible result."

The question then becomes: What constitutes a "useful, concrete and tangible result?"

The term "useful" appears in §101 and requires nothing more than a specific, substantial and credible utility. (MPEP 2107.01)

The terms "concrete" and "tangible" have not been directly defined. However, a review of recent cases that have attempted to use this standard is instructive.

The phrase "useful, concrete, and tangible result" first appears in *In re Alappat*, 31 USPQ2d 1545 (Fed. Cir. 1994). The claims at issue in *Alappat* were directed to a rasterizer that included as a last limitation "means for outputting illumination intensity data as a predetermined function of the normalized vertical distance." Thus, the "result" in *Alappat* is "illumination intensity data", which was considered concrete and tangible. This data is nothing more than numbers that represent a specific intensity level for light that may appear on a display at some point in the future. Nonetheless, the data were considered patentable subject matter.

In *State Street Bank & Trust v. Signature Financial Group*, 47 USPQ2d 1596, 1600 (Fed. Cir. 1998) , the Federal Circuit built on the "useful, concrete and tangible result" test by finding that a data processing system that produces "price, profit, percentage, cost, or loss" provides a useful, concrete and tangible result even though these values are expressed as numbers. *State Street Bank* at 1602. The numbers identified as a useful, concrete and tangible result merely represent the state of an accounting system for a mutual fund. In addition, the claims in *State Street Bank* do not recite a use for these values. Thus, the values produced were considered "useful, concrete and tangible" even without a claimed use for those values.

Lastly, in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, (Fed. Cir. 1999), the Federal Circuit applied the "useful, concrete and tangible result" test to a method claim. In *AT&T,* a method is provided for generating a message record that includes a PIC indicator. This message record represents a call made on a telephone system. The message record was considered a "useful, concrete and tangible result" even though it is only a collection of data representing a telephone call. In addition, as in *State Street Bank*, the claims in *AT&T* did not include a use for the result of the method. In particular, the claim in *AT&T* simply claims producing a message record not a use for that message record. Thus, a method claim does not need to include a use for a result of the method but instead simply has to generate a "useful, concrete and tangible result" in order to be considered a practical application of the method.

2. APPLICATION OF THE LAW TO THE CLAIMS

In this light of the Office Action's remarks, claim 1 has been amended to include a "A

computer readable storage medium having a tangible component with an application programming interface encoded thereon with computer-executable instructions" (emphasis added). Claim 1 now includes a storage medium having computer-executable instructions. Claim 1 has further been amended to an "AdHocQueryCriteria method returning a result including metadata indicating entities associated with data". Claim 1 therefore also returns a result.

As indicated on page 26, lines 17 - page 27, line 3, the AdHocQueryCriteria can be used for the retrieval of entity data. It allows the user to combine the data of multiple entities of different types into a single result row with only the properties of interest included. The results of an AdHocQueryCriteria query are returned in the form of a tabular result (or data) set. As such, the AdHocQueryCriteria has a specific and credible utility in data base management. Therefore, the result of claim 1 is a useful result.

The AdHocQueryCriteria of claim 1 is also a concrete and tangible result. An AdHocQueryCriteria is at least as concrete and tangible as profit and loss data as found in *State Street Bank*, a message record as found in *AT&T*, and intensity data as found in *Alappat*. An AdHocQueryCriteria does not exist as an abstraction but instead is stored on a computer-readable storage medium from which it can be used in data base management. In addition, the AdHocQueryCriteria is a real-world tool that must be created in order for certain data base management tasks to be performed. The fact that the AdHocQueryCriteria is needed for other processes to take place indicates that it is not a mere abstraction but a concrete and tangible thing. Since the AdHocQueryCriteria provided by claim 1 is a useful, concrete and tangible result, claim 1 provides a practical application of its method. As such, claim 1 represents statutory subject matter under the current case law and the MPEP.

In addition, as amended, claim 1 falls within the "machine" category of §101 since a computer-readable storage medium as found in the specification (pg.15 lines 9-17) represents a computer element which defines structural and functional interrelationships between the computer-executable instructions and the rest of the computer and which permits the computer-executable instruction's functionality to be realized. Such computer-readable storage media are statutory. (MPEP 2106.01 (I))

Claim 56 includes a step of "storing a result based upon the identified objects, identified metadata and the partial set of properties of the objects on a computer-readable storage medium."

Since claim 56 is directed to a method, it is directed to a statutory process. Further, querying a database and returning a result based upon identified objects, metadata and properties of objects is a useful, concrete and tangible result and as such claim 56 provides a practical application of its method.

As indicated above, querying a database for returning the data of multiple entities of different types into a single result row with only the properties of interest included has a specific and credible utility in data base management.

A query for returning the data of multiple entities of different types is also a concrete and tangible result because it is at least as concrete and tangible as the profit and loss data of *State Street Bank*, the message record of *AT&T*, and the intensity data of *Alappat*. Such a query for a database does not exist as an abstraction but instead is stored on a computer-readable storage medium from which it can be used in speech processing. Since the query provided by claim 56 is a useful, concrete and tangible result, claim 56 provides a practical application of its method. As such, claim 56 represents statutory subject matter under the current case law and the MPEP.

Rejection under 35 USC 103(a)

Claims 1 and 11-17 were rejected as being unpatentable over "Understanding SQL" by Martin Gruber (hereinafter "Gruber"), in view of U.S. Pat. No. 6,484,180 issued to Lyons et al. ("Lyons") and in further view of U.S. Patent 6,263,328 to Goden et al. Patent 6,263,328 was issued to "Coden et al." and it is assumed this Office Action referred to Coden et al. (hereinafter "Coden") instead of Goden et al.

Applicant has amended claim 1 to include a limitation of the method returning a result including metadata associated with the data. As discussed on page 37 of the Specification, rather than returning an entire object (or "entity") AdHocQueryCriteria returns only a data set. This can be an enhanced result set that also contains the metadata for the entity or entities from which the values were obtained. Therefore, any special processing requirements associated with

an underlying entity can be performed, or the underlying entity itself can be obtained, when necessary. Gruber recites a joinlist parameter to join tables. However, Gruber does not teach of using metadata to indicate entities associated with the data. As pointed out above, this metadata allows the underlying entity to be accessed if any special processing requirements are needed. Similarly, neither Coden nor Lyons teaches or recites of using metadata. As pointed out in page 4 of the Office Action, Coden teaches of "an object that forms part of the query of data" but does not disclose using metadata to indicate entities associated with the data. As pointed out in the Office Action on page 3, Lyons teaches of "an application programming interface exposing an adhocQueryCritera". Lyons does not recite the limitation of using metadata to indicate entities associated with the data. The limitation of using metadata to indicate entities associated with data is neither taught nor recited in the above references, and it is respectfully submitted that at least for this reason, claim 1 is in condition for allowance.

Claim 56 is similarly drawn towards a method that returns a result based in part upon metadata from a relational database. It is therefore respectfully requested that claim 56 is in form for allowance.

The foregoing remarks are intended to assist the Office in examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered exhaustive of the facets of the invention which are rendered patentable, being only examples of certain advantageous features and differences, which applicant's attorney chooses to mention at this time. For the foregoing reasons, applicant reserves the right to submit additional evidence showing the distinction between applicant's invention to be unobvious in view of the prior art.

Furthermore, in commenting on the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the same and the present invention have been mentioned, even though such differences

do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By:	/Joseph R. Kelly/
	Joseph R. Kelly, Reg. No. 34,847
	900 Second Avenue South, Suite 1400
	Minneapolis, Minnesota 55402-3319
	Phone: (612) 334-3222 Fax: (612) 334-3312

SD:JRK:slg